

Notice of Allowability

Application No.

10/073,625

Examiner

Joyce Tung

Applicant(s)

LAKOWICZ, JOSEPH R.

Art Unit

1637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/10/2004.
2. ☒ The allowed claim(s) is/are claims 28-82 (final claims 1-55).
3. ☒ The drawings filed on 11 February 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 6/10/2004 10/24/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

REASONS FOR ALLOWANCE

The applicant's response filed 6/10/2004 has been entered. Claims 28-82 are pending.

1. The following is an examiner's statement of reasons for allowance:

Concerning claims 28-45, no prior art has been found teaching or suggesting the system comprising a test sample, one or more metal particles arranged on a solid support, wherein the one or more metal particles and one or more biomolecules in the test sample are positioned at a distance apart sufficient to affect intrinsic emission of electromagnetic radiation of at least one of the biomolecules upon exposing the system to exciting electromagnetic radiation and wherein an extrinsic fluorescent marker is not a part of the system.

Concerning claims 46-66, no prior art has been found teaching or suggesting the system comprising a test sample and a suspension of one or more metal particles, and wherein one or more metal particles and one or more biomolecules in the sample are positioned at a distance apart sufficient to affect electromagnetic radiation emission of the one or more biomolecules upon exposing the system to exciting electromagnetic radiation.

Concerning claims 67-82, no prior art has been found teaching or suggesting the composition comprising a metal particle coated with one or more biomolecules, wherein the metal particle and at least one or more biomolecules are positioned at a distance apart sufficient to affect intrinsic emission of electromagnetic radiation of one or more biomolecules upon exposing the metal particle to exciting electromagnetic radiation and there is no an extrinsic fluorescent marker in the composition.

The closest prior art is the reference of Schalkhammer et al. (5,866,433, issued Feb. 2 1999) and further in view of the reference of Natan et al. (6,149,868, issued November 21, 2000).

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Schalkhammer et al. disclose a fluorescence sensor with a biorecognitive layer for measuring the concentration of one or more analytes in a sample in which the sensor involves fluorescent compound. Schalkhammer et al. do not disclose the sensor without an extrinsic fluorescence marker. Thus the teachings of Schalkhammer et al. do not anticipate or suggest the limitations of claims 28-45 and 67-82. Further, in view of the teachings of Natan et al., Natan et al. teach an assay system, which comprises a colloidal metal particle attached with biomolecules, and SERS substrate in which the biomolecules attached metal particles and the SERS form a complex (See the Abstract). There is no motivation to combine the teachings of Schalkhammer et al. and Natan et al. to render claims 46-66 obvious because the structure of Natan et al. provides an enhancement in vibrational spectral intensities, which is detected, by the system of Natan et al. (See column 1, lines 16-20 and column 5, lines 40-56).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Joyce Tung whose telephone number is (703) 305-7112. The examiner can normally be reached on Monday-Friday from 8:00 AM-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached at (703) 308-1119 on Monday-Friday from 10:00 AM-6:00 PM.

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Any inquiries of a general nature or relating to the status of this application should be directed to the Chemical/Matrix receptionist whose telephone number is (703) 308-0196.

3. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Art Unit 1637 via the PTO Fax Center located in Crystal Mall 1 using (703) 305-3014 or 308-4242. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Joyce Tung *J. Tung*
September 13, 2004

Kenneth R. Horlick
KENNETH R. HORLICK, PH.D
PRIMARY EXAMINER
9/16/04